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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,344	05/07/2001	Hiroshi Yokoyama	PW 0277195 TK(F)-060-US	1120
909	7590	08/19/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102			HUSON, MONICA A	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,344

Applicant(s)

YOKOYAMA ET AL.

Examiner

Monica A Huson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the paper filed 14 January 2005.

All previous art rejections are withdrawn as necessitated by applicant's amendment.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Bulgrin (U.S. Patent 5,997,778). Regarding Claim 1, Bulgrin shows an injection control method for a die casting machine, wherein molten material is injected into a casting mold by an injection cylinder unit (Abstract), comprising setting target velocity data specifying an injection operation required for the injection cylinder unit in advance (Column 11, lines 32-35); performing a first shot of an injection operation, and recording command data provided to the injection cylinder unit and detecting velocity data indicating the operation performed by the injection cylinder unit during the first shot of the injection operation (Column 16, lines 2-35); determining a difference between the detected velocity data and the target velocity data and calculating a correction value based on the difference by operating the injection cylinder unit for a predetermined number of injection shots by injection position feedback control (Column 16, lines 49-59); terminating the injection position control after the predetermined number of injection shots (Column 16, lines

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59-61); using the calculated correction value and generating command data for a second shot of the injection operation and operating the injection cylinder unit by providing to it the command data for the second shot of the injection operation while shifting the control to open loop control of the injection velocity by command data generated from the correction value and the previous command data (Column 16, lines 35-38; Column 17, lines 23-27; Column 21, lines 50-55).

Regarding Claim 3, Bulgrin shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein a value of servo delay in the injection cylinder unit is set in advance, and in calculating the correction value, the difference between the detected velocity data and the target velocity data is calculated in a state that the phase of the detected velocity data is advanced by the servo delay (Column 21, lines 19-35; Column 22, lines 24-33).

Regarding Claim 4, Bulgrin shows the process as claimed as discussed in the rejection of Claims 1 and 3 above, including a method wherein adjustment of the servo delay is made for each of low velocity section, high velocity section, and deceleration section of a shot of the injection operation (Column 21, lines 19-35).

Regarding Claim 5, Bulgrin shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein in setting the target velocity data, a pattern in terms of position and velocity for specifying injection operation is set in advance by a user, the pattern being converted into time-series position command data in terms of position and time so as to be used for injection position feedback control, as well as the pattern being converted into target velocity data in terms of velocity and time (Column 10, lines 2-53).

Response to Arguments

Applicant's arguments with respect to claims 1 and 3-5 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with regard to control processes:

U.S. Patent 5,258,918 to Giancola

U.S. Patent 5,518,671 to Takizawa et al.

U.S. Patent 5,870,305 to Yokoyama

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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February 4, 2005